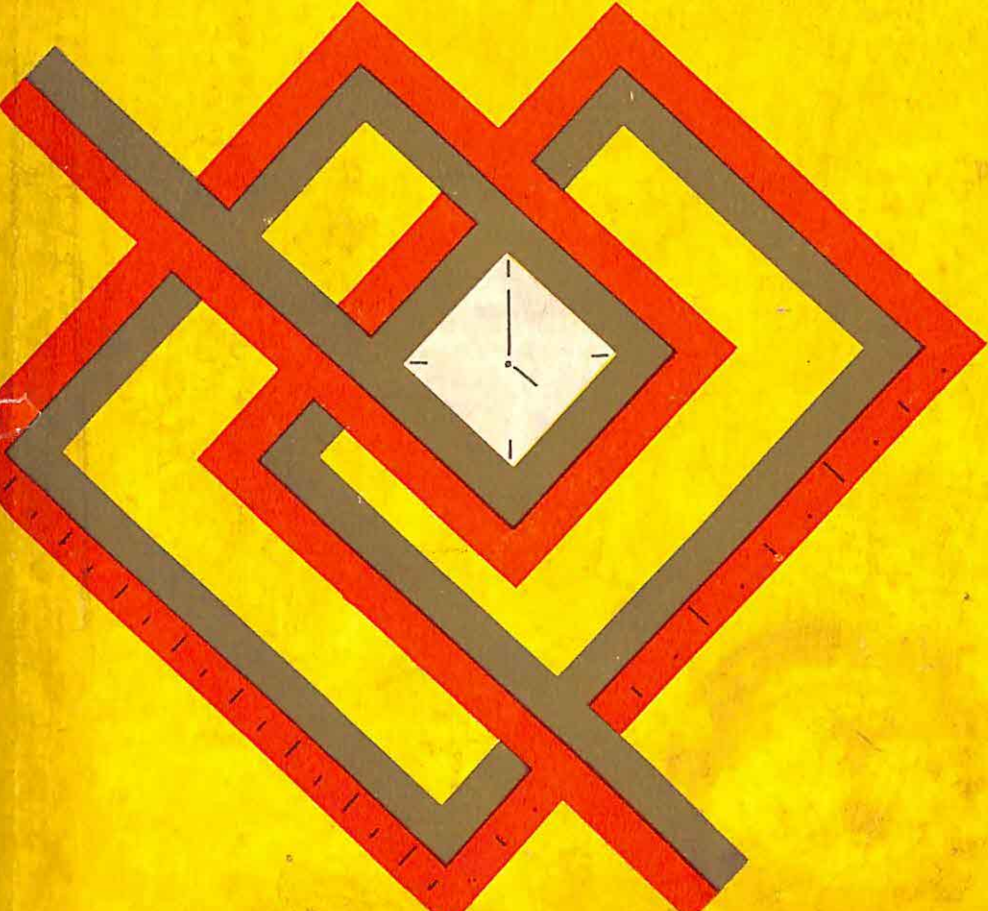
MEASUREMENT OF INNOVATION

ANTHOLOGY OF TOOLS



(Smt.) PILLOO BUCH

MEASUREMENT OF INNOVATION ANTHOLOGY OF TOOLS

During the last decade, a growing interest is seen in developing innovative programmes in educational institutions. A number of studies have been undertaken in the area of innovation development, adoption and diffusion process. The capacity of a school to diagnose its problems and develop innovative solutions has become the focus of study. The book "Measurement of Innovation — Anthology of Tools", is a compilation of selected tools and devices to measure different aspects of innovation. The selected tools have been developed in India as well as abroad.

The book includes descriptions of various tools and their scoring techniques. Excerpts of a number in India are also described.

The book is useful for school principals, district education officers and teachers who would like to have a self-assessment as well as the assessment of the adaptability of their respective schools. In addition, it is specially useful to research scholars working in the area of educational innovations and change.

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MEASUREMENT OF INNOVATION
ANTHOLOGY OF TOOLS

Dr. (Smt.) PILOO BUCH

Developed

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FOREWORD

Time is a valuable factor in conducting research. A good amount of time is always consumed in preparing a good, reliable tool for the research to be undertaken. Considerable amount of energy and time will be saved if such a tool required for the purpose, becomes available readymade.

The present work is a step in the direction to make a few such tools available to the research workers in the area of change and innovativeness. The monograph is the compilation of different tools of innovativeness used by researchers in India and abroad.

Part one deals with the introduction of the monograph and the discussion of the various tools, their nature, their method of scoring and the usuage done in the respective research. The excerpts of some such tools used in foreign countries as well as the actual tools used by Indian researchers have been given in part two.

Dr. (Smt.) Piloo Buch has compiled this monograph with meticulous care. The monograph will be helpful to a number of research workers studying innovation diffusion, adoption and school innovativeness.

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February 2, 1976.

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PART I

INTRODUCTION

"How can one measure the quality?" comes a pointed question from the people from every walk of life, say, agriculture, medicine, industry or education. In other fields, people experiment, develop and then always evaluate objectively their own creation and developments for they have the courage to face their failures and a desire to learn from their mistakes. In education, people do not show the courage to judge the success or failure, the quality or quantity of their experiments objectively and openly. They do not show the courage to admit their mistakes and failures and learn from them. As a result, there is an incredible lack of solid evaluative evidence on almost every innovative development, and educational experiments remain weak, less sought, and less asked for. The tendency is to equate evaluation with criticism rather than analysis. But the growing concern of the people for quality education compel educationists to be in line with other sciences.

Measurement of quality in education is needed for two reasons. Firstly, we want our schools to improve i.e. to be better. Improvement rests upon four elements viz., knowing the way things are, knowing what would be better, knowing how to make them better and wanting to make them better. For knowing the way things are, it is important to find efficient procedure by which a school can accurately diagnose its weakness. Innovations are adopted to remove the weaknesses but the adoption of an innovation in a school probably would not remedy its basic ills. Unless a school has a clear understanding of its weaknesses, it cannot select intelligently from the available innovations, nor can it unleash with reasonable direction its own creative energy in solving its problems. Self-assessment on scientific basis is the only answer.

The second reason is the need of an educator for a measure of quality as their job is to find out why some schools are better than others or why some inspite of their efforts lag behind. Assessment helps them to know in what way they have to increase their efforts and in what direction they have to push harder. The measures of individual or group achievement and efficacy of methodology are essential tools to assess understanding and wisdom in performance of their job.

The 'quality' or the 'goodness' of an institution has been measured in various ways in the past. The entire weight is to be thrown on the definition one accepts of 'quality' before measuring the same. The reports till date define it as adaptability or innovativeness. Adaptability has been defined by Mort—the pioneer of the concept as, "the capacity of an institution to take on new and more appropriate educational practices and discard outmoded ones." For Mort, adaptability is a dimension of goodness that has proved a useful research tool because instruments can be made to measure schools in terms of this definition of what a good school is.

A number of instruments have been prepared to measure adaptability or innovativeness of an institution in terms of adoption of innovation, rate of adoption, extent of adoption, diffusion of innovation within a system and outside the system etc. Instruments have been made to measure the stages of adoption as this helps in categorizing the systems into different adopter categories. The eighteen instruments represented in Table 1 below, incorporate one or more of the different aspects of an innovation.

The reader will find the instruments in the present table divided roughly into five groups, viz.,

1. Instruments wherein adaptability is measured in terms of only the number of innovations adopted.

2. Instruments which have added the variabie 'time' along with the number of innovations.

TABLE 1

Analysis of Various Tools to Measure Adaptability

Sr. No. 1	Name of the tool 2	No. of Innovations Adopted 3	Extent 4	Time 5	Stages of Adoption 6	Proneness to change 7
1	A Guide for Self-Appraisal of School Systems	✓				
2	The Growing edge	✓				
3	Mort-Pierce Time Scale	✓		✓		
4	A.P.S.S. Time Scale	✓	✓	✓		
5	Carlson's tool to measure rate of Adoption	✓		✓		
6	Larry's Instrument	✓				
7	Marion's Scale of Innovativeness	✓	✓			
8	Nan-Lin et al. Tool measuring Diffusion of an innovation		✓	✓	✓	
9	Miller's Inventory of Change Proneness					✓
10	Rao's Instrument to measure Innovations in Secondary Schools	✓				
11	Indices of Innovativeness—Seger & Holdaway	✓	✓	✓		

1	2	3	4	5	6	7
12	Bhogle's Instrument to measure Acceptance of Innovations	✓			✓	
13	Roosa's Scale of Measuring Rate of Adoption	✓	✓	✓		
14	Buch's Adaptability Scale	✓	✓	✓		
15	Rai's Instrument to measure Diffusion of Innovations				✓	
16	Bhagia's Tool to Measure Adoption and Diffusion of Innovations	✓	✓	✓		
*17	Doctor's Scale of Innovativeness					
18	Mukhopadhyay's Change Proneness Inventory					✓

* This is a Rating Scale.

3. Instruments which have further added the 'extent' of diffusion of innovation to number and time of adoption.

4. Instruments which measure the different stages of diffusion to measure the adaptability. The adaptability is measured here in terms of a school's relative earliness at different stages of diffusion.

5. Instruments which measure an individual's overall readiness to accept innovations and attitude towards innovation and change.

Researchers like Mort, Cornell, Miller, Rao and Larry have measured adaptablity of schools in terms of 'number of innovations adopted by the school. They thought that adaptability of a system can be inferred from the degree to which a school system had made adaptations in the past. They felt that it is easier to judge the future probable programme from the past performance of the system as the capacity of a school to take on more and more newer practices is a sure measure of its tendency to change for the new, for the better. 'Mort's 'growing edge' has provided criterion scores for a number of researches in Metropolitan School Study Council.

An instrument which measures only 'how many innovations adopted', will measure the tendency of adoption of the school in comparison with other schools to a negligible extent. The addition of the variable 'Time', gives more meaning and sensitivity to the instrument as one is able to know extent of diffusion of each innovation in different schools in terms of time.

Mort and Pierce added this variable in their instrument a year after the publication of "growing edge". The inclusion of the variable 'Time', helps in categorizing the system as pioneer, early adopter, late adopter or laggard. The study of the 'Rate of Adoption' by Carlson is totally based on this line of thinking.

Another variable that has been added to variables 'number and time' is the 'Extent' — the amount of usage of an innovation within the school. This is to know whether the innovation is still under trial stage or has been completely adopted. This variable gives greater clarification of the term "acceptance" and really discriminates between trial and adoption. The amount of use of an innovation reflects the risk taking behaviour of the school. The score that a school derives from the amount of use within a system, turns out to be a more useful quality score than that derived from introduction date only. An instrument having all the three factors/variables viz. number, time and extent measures three traits of a school system—the tendency to adopt, the relative earliness in adoption and the risk taking behaviour of the system. Instruments prepared by Marion, Buch, Roosa, Bhagia, A.P.S.S. and Seger and Holdaway represent this line of thinking.

The fourth group of instruments prepared by Nan-Lin et al., Rai and Bhogle measure the different stages of diffusion of innovation. Awareness, adoption and internalization decide the change-proneness of an institution. A school which is relatively early in knowing about innovation, in adopting innovation and institutionalizing the innovation, definitely shows a trend of a pioneer or an early adopter. School which becomes aware relatively late will naturally fall into laggard or late adopter category.

I. A GUIDE FOR SELF-APPRAISAL OF SCHOOL SYSTEMS

This instrument is often referred to as "The Lag Book" or the "Mort-Cornell Guide". It was first published in 1937 and was extensively used in the Pennsylvania study. It helps any executive who wants to know the adaptability of his school system by himself. Mort and Cornell throught it worthwhile to observe adaptations which have taken place and which are in process in school in order to find out the adaptability of that school system. This was possible by checking against a selected list of adaptations referring to most of the factors required in judging the adaptability of a school in general.

The instrument "Guide" does not contain all such adaptations which an educational expert might fancy as desirable for a lighthouse school and can be found in a few leading and pioneering schools only. The adaptions included in the instrument are those which can be found in any ordinary public school in U.S.A. or in other countries. An executive by checking himself the presence or absence of the adaptations in his school against the given list can well judge the adaptability of his school in comparison to an ordinary average school existing at that time. Hence, it is called the self-appraisal device. The instrument includes items which offer a wide variety in the form of adaptations. They refer to the steps taken by the schools to improve their educational programmes. It further includes items which relate to the activities carried on by schools in anticipation to the changes to be introduced in future to satisfy the needs of the society.

The instrument has four major divisions viz. Classroom Instruction; Special Services for Individual Pupils; Educational Leadership and Physical Facilities and Business Management. Each of these major divisions is subdivided into two major sections. These sections are further divided into two, three or four sub-sections. These subsections are considered as the major adaptation groups. e.g.:

The Classroom Interaction

The Curriculum
Pupil Activity

Flexibility of curriculum
Breadth of curriculum
Courses of study

There are twentythree such subsections in total. Each of the subsection is again divided into items, e.g. Flexibility of Curriculum is subdivded into : (a) Teaching periods, (b) Supplementary Materials and so forth. There are 183 items to which we refer as adaptations.

Each of the 183 items is followed by a question which suggests the nature of observation and interviews to serve as the basis for the presence or absence of the adaptation. The question is followed by three or four statements which are further guides for observation and interviews. Answers in 'yes' or 'no' indicate the presence or absence of the indication of adaptation.

The scoring is quite simple. The recordings of 'yes' and 'no' entries to the statements followed by each question of an item, helps in drawing the conclusion about the presence or absence of the indication of adaptation. It is from these three or four indications of the adaptation that the conclusion is reached with respect to the presence or absence of the adaptation with which they are associated. The presence or absence of the adaptation is determined by the weight of evidence as recorded opposite these indications of adaptation. It gives a sectionwise as well as groupwise picture of adaptations which are there in the system in process at the time of observation.

Weightings for the various sections of the instrument were based on judgments of American educators. Fortyseven school systems in Eastern United States and in the Union of South Africa were administered the instrument for checking its reliability and item validity. Revisions of form and content were made to increase objectivity, reliability and validity.

2. THE GROWING EDGE

This instrument was developed by Mort, Vincent and Newel (1945). It has provided the criterion scores for most of the later adaptability studies.

The process of measuring the adaptability of school systems by means of this instrument is based upon the observation of school practices which reflect the growing edge of American education.

The specific practices included in the instrument are organized around four major areas of educational purpose :

(i) The teaching of the basic skills :

(a) Teaching of basic skills in life-like situation,

(b) Variety of basic skills taught.

(ii) The teaching of the areas of knowledge :

(a) Teaching facts in relation to their meaning and usefulness.

(b) Breadth of knowledge area taught, including variety of resources for knowledge.

(iii) Discovery and development of special aptitudes of individuals through test and tryout.

(iv) Development of gross behaviour patterns like citizenship, character and thinking.

Each item of the instrument is a description of a specific school practice. The items are drawn from "what schools can do?" a publication bringing together the results of the work of more than two hundred and fifty school people who made an intensive study of the practices existing in their schools. The particular items included in this instrument were chosen by a panel of trained educators. The high school form consists of 85 items while the elementary form consists of 64 items.

In general, the technique of using the instrument consists in discovering in a given school system the presence or the absence of specific practices. This instrument may be applied as a self-evaluation guide or by outside observers. It is not neessary that the person using the instrument (a field worker) observes in actual operation every practice for every item. But he must satisfy himself by reliable evidence of some kind that a given practice described in the instrument (or its allowable substitute) has been an event in the life of the pupils within four month period previous to his visit to the school.

The scoring of the responses goes according to the tickmark made by the respondent. The direction for the resposdent is simple. If the situational example quoted in the item or an equivalent of that is present a single check (√) is to be put. If there is a strong evidence that the example given in the booklet (or the alternative) is characteristic of the teaching with respect to the particular skill in question, two check marks are to be put. The score is added-up at last.

Test of reliability made by the split half technique yielded a coefficient of reliability of .88 for the high school forms and .89 for the elementary school forms.

While the two parts of the instrument were not designed to be comparable, one being for the elementary school and the other for the high school, they are both designed to measure the adaptability of schools. Some indication of the validity of the instrument is revealed by an intercorrelation of .68 between the two forms. The intercorrelation of the elementary school form with another measure of adaptability "The Time Scale" is .51 and the same for the high school measure is .58.

3. MORT-PIERCE TIME SCALE

This instrument, developed by Mort and Pierce in 1947, has been used extensively in Metropolitan School Study Council studies. It aims at finding out the index of adaptability of a school system by finding out at what stage of diffusion process, a school introduced a given innovation. By knowing the date of introduction of a given innovation, it was possible to find out the relative characteristic of the school as pioneering, early adopter or late adopter and laggard. The instrument helps in indicating a school's position in relation to current and changing practices as they relate to the daily school programme.

The logic behind this instrument is that it is easier to judge the probable future programmes of a school, to predict the potentiality and adaptability of a school of taking new programmes from the past performance of the same. The extent to which a school has taken on newer and proved practices shows the potential adaptability of the school.

In order to determine the date which would categorize the school as pioneering, early adopter and so forth, it is necessary to find out the dates of introduction of a given adoption in seventy different schools. Again, to get a pretty good index of a school adaptability status, one such adaptation would not have been reliable. Hence, twentytwo adaptations which were widely known and also were within the reach of the system were selected.

Credit to a system of the introduction of an innovation was given in relation to the total diffusion of the same innovation among the other school systems, e.g. if a school was first to introduce an adaptation, it received a value of 9 points; if it was last, the point value was determined by the number of schools already having made the adaptation, the fewer having made the adaptation, the higher the point value.

Addition of all the scores thus derived on the introduction of all the innovations, indicates the relative position of the school system to be classified under the four adopter categories.

The reliability of the instrument obtained by the splithalf technique is .84.

4. A.P.S.S. "TIME SCALE"

The A.P.S.S. (Associated Public School System) Time Scale is a further refinement of Mort-Pierce instrument. Rather than taking merely the list of practices introduced in the school, this instrument takes into account the extent of use and date of introduction of the practice in the school. Thus, the main feature of this tool is the weight being given to the degree of use of the practice in a school.

There are thirtythree practices in this instrument. Information is obtained for each practice in terms of percentage of pupils involved and the status of the practice in terms of its being used on an experimental basis or being used occasionally or being used on a widespread basis. Assuming a practice is in use today, the respondent marks E (experimental use), O (occasional use) or W (widespread use) as is appropriate in the column supplied. Information is also obtained about the year of discontinuation of a practice which was once adopted. On the basis of the information about the data of introduction and extent of use, indice of adaptability are being developed.

Adler (1955) is of the opinion that the score derived from the amount of use within a school (E, O and W values summed) is a more useful quality score than that derived from introduction dates.

Eventhough the column for the year of discontinuation has been supplied, nothing has been done for its scoring possibility in this instrument inspite of the fact that the discontinuation of an inappropriate practice is too an adaptation.

5. CARLSON'S TOOL TO MEASURE RATE OF ADOPTION

Carlson's (1965) study of rate of adoption uses a simple measure of time of adoption of innovations by the superintendents in their school district. His technique involves in finding out the time at which a particular innovation was adopted.

The three innovations about which diffusion rates were gathered are modern mathematics, programmed instruction and team teaching. In order to get a reliable measure, the tool was administered to only those superintendents who met the following two criteria :

- (i) The superintendents should be in their positions at least one year prior to the first adoption (in their geographical area) of any of the three innovations used in the measure of the rate of adoption;
- (ii) They all had adopted at least one of the three innovations.

The tool was administered to 38 superintendents in Allegheny County and 15 in West Virginia keeping the above two criteria in mind.

In order to get a systematic and logical combination of the three separate rates of adoption for each individual in the sample, "Sten Scale" technique has been used. With the help of this sten scale system, the separate adoption rates on modern mathematics, programmed instruction and team teaching are converted into a stanine system of standard scores. The standard scores then are added directly, establishing thereby a numerical value for the combined rates of adoption.

The respondents have been divided into different categories of adopters viz., early adopters, early majority, late majority and late adopters according to the summed sten scores reflecting the rate of acceptance|adoption of three innovations.

The percentage in each adopter category is roughly as under in the present tool : early adopters constitute 16 per cent, early majority 37 per cent, late majority 29 per cent and late adopters 18 per cent.

6. LARRY'S INSTRUMENT

Larry (1965) wanted to find out the relationship between the organizational climate and the innovativeness in the central administrative offices of selected highly innovative and non-innovative school districts in the State of Ohio.

In order to categorize the schools as innovative or non-innovative, he has developed an instrument measuring the adoption of innovations in seven different areas. They are : (i) business, (ii) finance, (iii) administrative organization, (iv) pupil personality, (v) staff personnel, (vi) instruction, and (vii) school community relations.

Larry has used primarily, the number of innovations adopted as an index of innovativeness. Hence, the total score derived on the adoption of the innovations in all the areas finally judges the innovativeness or the non-innovativeness of the school system.

7. MARION'S SCALE OF INNOVATIVENESS

Marion (1966) in his scale of innovativeness has used two indices of innovativeness. Innovativeness—the dependent variable of his study was defined as the number of educational innovations a principal adopted from those under consideration.

The number of innovations adopted by a school constitutes the first index of innovativeness (I_1). Adoption of innovation here meant that the practice was used regularly in the school and not incidentally or occasionally. The second index of innovativeness (I_2) used in this study was the extent of use made of each innovation. The five measures of extent were combined to constitute I_2.

The decision to produce two indices was based on the belief that the adoption of a number of innovations is a different type of behaviour than the adoption in depth of the innovations.

Five innovations viz. departmentalization in grades IV, V & VI, subject consultants, parent-teacher interview, French instruction and television, were chosen out of the twenty supplied by the Central Office of the school district. The innovations were chosen primarily in terms of their ease of investigation so that their acceptance could be readily discovered. All the innovations were still in process at the time of investigation and on inquiry it was made clear by all the principals that there was no compulsion from the top for its adoption. They were free to adopt them or reject them.

The scores assigned to each principal on each innovation were added together, rank-ordered and then converted to scores which were additive. These scores constituted the second index of innovativeness, a combined measure of extent of use of the five innovations.

The objective behind developing 'second index (I_2)' is in an endeavour to determine which variables are significantly related to the extent to which the innovations were adopted within the school and also to ascertain whether these variables are the same as those associated with adoption of the five educational innovations.

8. NAN-LIN et al. TOOL MEASURING DIFFUSION OF AN INNOVATION

Nan-Lin et al. (1966) have prepared a tool to measure the assimilation of an innovation. They have tried to measure the assimilation of the innovation within an institution at different stages of diffusion. The innovation in the study is "Schedule modification". The study was conducted in three Michigan high schools. The study was intended to serve as a pilot study for a similar investigation in Thailand.

The tool includes four variables. These four dependent variables are : (i) Time of awareness; (ii) Time of adoption; (iii) Internalization and (iv) Self-perceived change orientation.

The variable "time of awareness" is measured simply by asking the month and the year in which the teacher first became aware of the innovation.

"Time of adoption" is measured again by finding out the month and the year in which the teacher had adopted the innovation.

The investigator did not find adoption time a meaningful index as a large number of respondents indicated that they were not individually permitted to make adoption decision. They felt that in some cases the adoption done was a forced decision while in some cases the school had first adopted the innovation and then they were individually asked to adopt it.

Innovation internalization has been defined in this study as the extent to which a teacher perceived the innovation as relevant and valuable to his role performance in the school. In other words it is the degree of a teacher's attitudinal acceptance of a specific innovation. This variable is measured with the help of four items, each having seven responses. This permits the highest possible score to be 28 for a respondent. The higher the score, the greater was the degree of internalization.

The investigator has found this variable quite meaningful an index in the present research as it helps in finding out the relationship between internalization score and a teacher's perception of the advantages or disadvantages of the innovation quite clearly. It was assumed that a teacher who had internalized the innovation would perceive more advantages of the innovation than disadvantages.

The variable, 'self-perceived change orientation' tries to measure the attitude of a teacher towards change in general. It has been also measured through four items each with seven response categories.

The investigator felt that as the three variables-change orientation, innovation awareness and innovation internalization are interrelated, either change orientation or innovation internalization might be abondened if the two variables were found to overlap considerably. Conceptually, it was assumed that the two variables were different : one dealt with general attitude towards change at any point in time : the other dealt with the attitude towards a specific innovation after it was known of or adopted.

The tool gives four separate measures of the adoption of innovation. No combined score has been attempted.

9. MILLER'S INVENTORY OF CHANGE-PRONENESS

Miller's (1967) inventory to measure change-proneness functions as a self-appraisal device for the persons in the field of education. It is based on the assumption that a personal commitment to mental flexibility, open-mindedness and curiosity is an essential pre-condition for effective change. By raising a series of questions about one's private attitude towards change, Miller believed that favourable conditions will be created for possible restructuring of attitudes that relate directly to one's beliefs about change.

The classroom teacher, the principal and also the superintendent, all the three can use the same inventory. Twelve common questions form the core of the inventory with a few additional questions addressed to specific groups. There are five, seven and nine additional questions for teachers, principals and superintendents respectively.

The rating is done on a simple seven point scale. The added score gives the estimate of a person's change-proneness.

10. RAO'S INSTRUMENT TO MEASURE INNOVATIONS IN SECONDARY SCHOOLS

Rao's (1967) instrument to measure innovativeness is an adaptation of the 'Growing Edge' of Mort. He has selected forty-five typical innovations in seven different areas. They are : (1) Syllabus and Classroom Instruction, (2) Teaching of Skills, (3) Enrichment of knowledge, (4) Variety of Experiences provided to Students, (5) Student Services, (6) Examination, Evaluation and Internal Assessment, and (7) School Administration and Community Relations.

The respondent is expected to indicate whether he has got the mentioned practice or similar one in his school. He has to mention any variation that he might have made in the practice. The instrument also collects the data about the year of adoption.

An innovativeness score for each school has been developed by giving one score to each new practice or experiment tried by the school. The total score represents the sum total of the new practices and experiments conducted and as reported by a school system.

This total score becomes the innovativeness score for the school system and serves as a measure to know and differentiate between more innovative schools and less innovative schools.

11. INDICES OF INNOVATIVENESS — SEGER AND HOLDAWAY

Seger and Holdaway in order to determine the relationship between the variability in adoption of new practices among the schools within one school system and the characteristics of the principal and the school, developed a tool viz., the Indices of Innovativeness (1968).

The five innovations used in the tool were : (1) departmentation of staff in grades 4-6, (2) regular and systematic use of central office consultants, (3) parent-teacher interviews during school hours, (4) the teaching of French in grades 5 and 6 and (5) regular use of television as an educational aid.

The five innovations were used to discriminate between adopter and non-adopter units. Each of the innovation was to meet three criteria. The innovation should have been (1) approved as a legitimate option by the central administration, (2) introduced sufficiently recently for some schools to have adopted the practice and at the same time for a considerable proportion of the schools to have refrained from adoption, and (3) perceived as an innovation by the participants in the study. All the five innovations represented a variety of school activities, the adoption of which, would indicate a general tendency towards the adoption of new practices.

After studying the different contentions by Mort, Rogers and Rogers, Katz, Hamilton and Levin, about the innovativeness of a system, Seger and Holdaway decided to develop three separate indices of innovativeness, viz., (1) number of innovations adopted, (2) extent of adoption, and (3) relative earliness of adoption. The data from the study were subjected to Pearson and Spearman correlation analysis, multiple regression analysis and factor analysis for ascertaining whether the three indices of innovativeness were related but relatively independent measures of the tendency to introduce new practices.

Index I_1 measures the number of new practices out of the selected five present in the school. The score, therefore, ranges from zero to five.

Index I_2 is used to assess the extent of utilization of the five practices. This measure helps in discriminating a principal who has an overall limited adoption of the new practices more completely. The score for I_2 is obtained by normalizing the sums of percentages of adoption of each of the new practices,-the use of a nine category normal distribution produced scores ranging from one to nine. I_2 really measures the extent of innovation on the trial-adoption end of the awareness-adoption continuum.

Index I_3 is developed to measure a tendency towards early adoption of new practices. It is assumed that the earlier-adopting principal does not necessarily adopt all available new practices nor does he adopt them to a greater extent than does a late adopter. Only those principals who had occupied their present positions for at least one year before the reported adoption of the three practices viz., parent interview, French teaching and television were taken in the sample.

From the correlation analysis it has been found out that a relationship among the indices is inherent in the definition, and that a score on any one index of innovativeness indicates a score on the other two. However, in the present study a score on any one index does not fix the score on either of the other two. It, therefore, supports the contention that a positive and significant relationship would exist but the ability to predict a score on one index from a score on the other would not be great. These expectations seem to be consistent when the three indices purport to evaluate differing elements of the common phenomena of innovativeness.

All the indices are related but not predictable one from the other. Seger and Holdaway observe that they tend to "factor out" as a legitimate statistical dimension. A combination of the tendencies to adopt new practices, to adopt these more extensively, and to adopt them earlier, can possibly be used as a gross innovativeness measure.

12. BHOGLE'S INSTRUMENT TO MEASURE ACCEPTANCE OF INNOVATIONS

The dependent variable in Bhogle's study (1969) is "Acceptance of Innovation". It is being studied in the light of the influence thrown by some social, psychological and the organizational factors in the process of change.

She has prepared two scales to measure innovation acceptance. One scale is a simple instrument inquiring from the headmaster the number of innovations adopted by them out of the five selected by her. The five innovations are: (1) Formation of Science Club, (2) Deputation of Teachers for refresher course, (3) Establishment of Vocational and Child Guidance Clinics, (4) Improvement of School Libraries under centrally sponsored scheme, and (5) Teaching with audio-visual aids. Yearwise data for the above innovations have been collected regarding the awareness of innovation, the interest taken and evaluation done by the headmaster of the adopted innovation and finally the tryout and acceptance of the innovation. Information has also been sought about the continuation of the adopted innovations. The yearwise data regarding the five stages of the adoption process of all the five innovations, helps her to classify the headmasters into different adopter categories.

The second instrument is a questionnaire measuring innovation-proneness of teachers. It contains twenty groups of different statements about the five innovations selected for the study. Each group contains three statements. The teacher is requested to put a mark against the statement he agrees the most. The points gained by the teacher at the end decides the innovation-proneness of the teacher.

10.12.93

13. ROOSA'S SCALE OF MEASURING RATE OF ADOPTION

Roosa (1969) measured the rate of adoption by schools on twenty innovations which were in the process at the time of study. They were innovations well scrutinized by the persons in the field. The fourteen schools in the sample were only those schools in which the principal had been on the job for at least two years.

A weighted scaling technique was used to rank the schools on their rate of adoption of educational innovations.

His technique of measuring the rate of innovation includes there things : (1) time-which is found by comparing the date of adoption of the twenty innovations in each of the sample school; (2) usage-which is found by comparing the amount of usage of twenty innovations in each of the sample school and (3) time + usage — which is the total score of points assigned for time and usage of the twenty innovations.

Scoring on time is done by giving credit for the adoption of each of the innovations according to the time interval by the investigator. Usage is found by comparing the amount of usage of twenty innovations in each of the sample school. It is scored on a five-point scale—like 'not used', 'experimental use', 'occasional use', 'used in almost all possibilities' and 'used in all possibilities'.

The total score of points assigned for time and usage of twenty innovations finally gives rank to the schools in the sample on the rate of adoption of educational innovations.

The concurrent validity of the scale has been established.

Roosa's scale has its bearing on Mort's Growing Edge, Mort-Pierce Time Scale and A.P.S.S. Time Scale. Instead of taking only number of innovations adopted, he felt it necessary to go deep in the usage of the same on A.P.S.S. line.

14. BUCH'S ADAPTABILITY SCALE

Buch (1972) has prepared the 'Adaptability Scale' to find out the relationship between the personal characteristics of a principal and the adaptability of a school.

The investigator assumed that a measure of school adaptability can be developed in terms of the number of innovative practices introduced in a school and the extent of its introduction. With this concept, she has selected nineteen innovations. The two criteria kept in mind in the selection of innovations were: (i) they should be known in all the States and (ii) the feasibility of the innovation; there should not be any financial as well as administrative difficulty in its administration.

The investigator further selected two criteria in the preparation of the scale to measure school adaptability, viz. :

(i) The number of innovations—how many innovations from the given list have been introduced and

(ii) The extent of introduction—whether these innovations have been introduced fully or partially.

Her scale contains four inquiring columns, viz. (i) whether introduced or not, (ii) partially or fully, (iii) year of introduction, and (iv) continues or not.

The scoring of the scale is quite simple. If an innovation is introduced fully, two credits are given. If it is introductd partly, one credit is given. The scale, therefore, has a score range of 0 to 38.

The scale has a face validity. However, it was decided to determine the validity of the scale with some external criterion. The coordinators of the extension services departments, who are supposed to be the agents of change in the area of education, were requested to rate the school as adaptable or non-adaptable.

Finally, t-test was used to find out whether the scale differentiated between adaptable and non-adaptable schools.

The reliability of the scale (r = .86) has been found out by test-retest method.

Buch like others has given more weightage to adoption of innovations for measuring school adaptability. The argument put forth by her is that she did not consider the year in which a particular innovation was introduced as this might give a wrong picture of the degree of adaptability of a school, specially in the rural areas where the new innovations might not have reached in absence of any dissiminating agency. However, though not included in the scoring system, this item was introduced in the scale as it is likely to give rich information for those who might be interested in studying the dissimination process of new ideas and practices.

The next question was the consideration of the continuation or the discontinuation of an innovation in the school. Like Adler (1955) she felt that the scores based on the extent of adoption of an innovation provided more reliable data than those derived from introduction or discontinuation dates. It was, therefore, decided not to give any score to the time of introduction and discontinuation. Still, however, the need to retain these columns was felt as it might provide the data for future studies.

15. RAI'S INSTRUMENT TO MEASURE DIFFUSION OF INNOVATION

Rai (1973) in her tool to measure the diffusion of innovation, has tried to measure the four dimensions of the process of adoption. They are : (i) Time of awareness; (ii) Time of adoption; (iii) Internalization and (iv) Process of self-perceived change orientation.

The innovation under study is "Setting better question papers". She has not prepared a separate tool to measure these dimensions for these dependent variables but a set of questions have been framed to measure the above variables and have been included in the main questionnaire. There are ten items in all about these dependent variables.

A straight question about the year and the month in which the teacher first came to know about the innovation measures the variable *time of awareness*. A teacher who comes to know about the innovation immediately after the innovation was floated in the air from the source is considered to be early as regards the "time of awareness". The innovation — 'setting of batter question papers' was first discussed and publicised in September 1963. Hence, the scoring scheme to qualify the time of awareness was as under :

Range	*Scores*
1963 Sept. to 1964 August	5
1964 Sept. to 1965 August	4
1965 Sept. to 1966 August	3
1966 Sept. to 1967 August	2
1967 Sept. to 1968 August	1
After August 1968	0

This scoring key was used for the teachers who started their job as teachers before September 1963.

Another direct question regarding the year and month of adoption of the innovation measures the variable *time of adoption*. The time lag between one's 'becoming aware' of an innovation and 'one's experimenting' the same is the basis for scoring the variable. The philosophy behind this is that, a teacher who is aware of an innovation and experiments it immediately, shows a better adoption behaviour than one who becomes aware and is not motivated to experiment it for a long time. The scoring scheme was as under :

Time lag between awareness
and the first practice.

	Score
1st year	5
2nd year	4
3rd year	3
4th year	2
5th year	1
more than 5 years	0

Four statements, two positive and two negative were framed to measure the variable-internalization. The teacher was asked to indicate the extent to which he/she agrees to the given statement on a five point scale (agree very much, agree a little, don't know, disagree a little and disgaree very much). A score of five was fixed for 'agree very much', four for 'agree a little' and so on. The weightage was reversed in case of negative statements.

The variable '*self-perceived change orientation*' has been measured with the help of four statements showing both favourable and unfavourable attitude towards change process in general. The teacher was required to indicate the extent to which he/she agreed to the statement. Weightage for the favourable statement was of 5, 4, 3, 2 and 1 and the same was reversed for an unfavourable statement.

Rai's instrument is the replica of Roger's instrument measuring the assimilation of an innovation. Rai has taken different innovation and has tried to find out the relationship between the diffusion of the innnovation and the characteristics of teacher in Indian context.

16. BHAGIA'S TOOL TO MEASURE ADOPTION AND DIFFUSION OF INNOVATIONS

Bhagia (1973) has developed a tool to measure the adoption and diffusion of innovations. She has selected fourteen innovations for the study. These fourteen innovations were selected on three criteria viz. the innovations should be :

(i) known to all the principals,

(ii) of varying diffusibility, and

(iii) obligatory for the adopting units.

In her tool, she tries to measure two dimensions of diffusion— (i) the rate of diffusion and (ii) the speed of diffusion. By 'rate of diffusion' is meant the number of schools in which an innovation is accepted. while 'the speed of diffusion' means the number of years in which the same innovation is accepted. It is to be remembered that her study deals with the characteristics of innovation and its diffusion among school systems.

In order to find out the adoption, rate and extent of diffusion of innovation, four questions have been put to the respondents. They are :

(i) Whether the innovation has been introduced or not,

(ii) the year in which it was introduced,

(iii) whether it continues or not and if not,

(iv) the year when it is discontinued.

The introduction or non-introduction gives the idea of the cumulative percentage of the adoption of innovation. The speed with which the innovation has been introduced is measured by the time—the mentioning of the year of adoption and the information regarding the continuation as well as the year of discontinuation of the innovation measures the extent to which the innovation has been diffused.

17. DOCTOR'S SCALE OF INNOVATIVENESS

Doctor (1974) has prepared an innovativeness scale for schools.

She thought innovativeness to be a continuum and assumed that the schools stood on the various dots of this continuum, e.g.

School A School B
: :
1 2 3 4 5 6 7 8 9 10

Here school 'A' is on the 2nd point of innovativeness and school 'B' could be on the 8th point of innovativeness.

The hypothetical continuum is thought to be of ten categories and each of the ten categories of the schools is described in ten different statements for the purpose of rating.

After having personal interview of the principal and due discussion about the programmes of the school, the investigator has rated the schools on the above continuum of innovativeness. The rating was checked again with the district education officer's judgement. In cases of difference of opinion, the programmes of the school in question were discussed in a joint meeting of the two and final rating was given.

On the basis of these ratings, the schools have been divided into three categories viz. highly innovative schools, average innovative schools and low innovative schools. The scale point 10, 9, 8 and 7 refer to highly innovative schools points 6, 5 and 4 refer to average innovative schools and 3, 2 and 1 refer to low innovative schools.

The characteristic feature of her scale is that the innovativeness of the school is decided on the general image that a school raises in the eyes of the investigator and the education officer on the basis of the various programmes conducted in the school and not on the actual existence of some definite innovative practices present or absent in the school.

18. MUKHOPADHYAY'S CHANGE — PRONENESS INVENTORY (CPI)

In the process of constructing the tool the investigator draw heavily upon Barnett (1953), Miller (1967) and Rogers (1962), for the conceptual aspects. The acceptance of innovation is a mental process. The general disposition or reaction of an individual towards innovation depends upon his personal commitment to change. The word 'proneness' also means the inclination towards.

In order to develop the inventory it was essential that the personal commitment be analysed to further smaller components. Miller (1967) suggested three components—mental flexibility, open-mindedness and curiosity. To specify the components the investigator sought opinion of five experts comprising school teachers researchers and experts in research in innovation and change process to define a change prone teacher. These definitions were analysed. It was found that a change prone teacher is open minded, eager to know (curious-Miller), and ready to make extra effort, reviews his own actions periodically, communicates ideas to others, and have experimental attitude. It is evident that the components suggested by Miller (1967) have come in different language within the suggested characteristics. Further it was thought that principal's change proneness needs to have special consideration. Beside his personal actions, his administrative behaviour should also reflect his change proneness.

After these specifications were made, items in question form on each component were developed separately. After needed scrutiny, the number of items left for the final draft was 33 common for teachers and principal and 12 for principal's administrative behaviour. Each item was provided with a five point scale (Never, Seldom, Occasionally, Often, and Always).

The inventory was administered on 60 secondary school teachers. The split half reliability found by using Spearman-Brown Prophecy formula was 0.82 which is significant beyond .01 level of confidence. Thorndike and Hagens (1961) maintain that a test may be said to have validity when the tasks that it presents to the respondents correspond to the contents. In absence of any external criteria the content validity of the inventory was established by developing the items on particular content (components) of the personal commitment (components). The item validity was not calculated.

1. Excerpts from

A GUIDE FOR SELF-APPRAISAL OF SCHOOL SYSTEMS

1. Classroom Instruction

A. *The Curriculum*

1. *The Flexibility of Curriculum.* The curriculum is sufficiently flexible to provide for individual pupil interests and abilities and to permit teachers to exercise judgement and initiative in the choice and arrangement of activities, subject matter and method:

Totals : Yes ________ No ________

Supplementary materials. A variety of reference books and materials should be available for each subject project whether in classrooms or in special rooms.

Q. What supplementary materials are available for use by your class ? Where are they kept and where used ?

Interview : Teacher,
Principal

Observe : Books in room,
Pamphlets,
Supplies.

Evidence ____________

____

____

____

____

____

1. There are encyclopedias for children in the elementary classrooms. Yes——No——

2. There are several sets of social studies books in the upper grade rooms or a large variety of single copies. Yes——No——

3. Crayons, watercolours and large sheets of paper are available in elementary classrooms. Yes——No——

4. A set of reference books pertinent to the subject being studied is available in high school classroom. Yes——No——

5. Teachers are collecting and filling pamphlets, magazines, and other materials useful in teaching their respective subjects. Yes——No——

2. Excerpts from

THE GROWING EDGE

1. The Basic Skills

A. *The Basic Skills in Life-Like Situations*

In the adaptable school, much of the teaching of the basic skills grows out of life situations. Wherever possible, basic skills are used meaningfully in life-like situations to which some measure of reality and importance is evident in the minds of the pupils. These situations are well matched to the abilities and interests of the pupils, for the latter enter into them as activities which *they want to do*

Directions :

> Following are listed five areas of basic skill teaching. For each area an example is given showing what is meant by "a situation as real as possible used by teachers to exemplify the meaning and usefulness of the basic skills".
>
> If you find this example present, make a single check (√) in the appropriate parenthesis in the score booklet. If you do not find this example present, but one in your opinion just as good, make a single check in the appropriate parentthesis in score booklet, but WRITE OUT THE ALTERNATIVE EXAMPLE in the space provided in the score booklet.
>
> If there is *strong* evidence that this example (or your alternative) is *characteristic* of the teaching with respect to the particular skill in question, make two check marks (√ √) instead of one in the appropriate parenthesis in the score booklet. (To merit two check marks, there would have to be strong evidence of *several other* life-like uses made of the particular skill in question).

1. *English Composition*

Example : Correspondence with men in the armed services is utilized as means of teaching English usage, composition, punctuation and spelling.

3. *Mathematics*

Example : Information of interest to the class is computed by students from data in the town report or the town budget.

4. *Speech*

Example : Pupils, after special preparation, form a panel to discuss a current problem before class or school. Questions are numerous, or panel members are so rotated, that almost all pupils get opportunity to speak.

B. *Variety of the Basic Skills*

1. *Reading*

Attention is given to a variety of reading skills such as reference reading, reading a newspaper, reading magazines, skimming, and reading aloud.

a. *Stndents are taught how* to use the Reader's Guide in *locating needed information*.

d. *Students are taught how* to use the preface, table of contents, index, lists of statistical tables and other special features *in locating specific information in a book*.

f. *Students select from* library, and *read non-fiction books* (bibliography, current problems, criticism, etc.). There are *at least twentyfive* such adult books in *constant circulation*.

2. *Mathematics*

Mathematics includes instruction in a variety of skills such as arithmetic, statistics and use of charts and graphs.

a. *Students learn to prepare graphs* as a means of presenting information.
d. *Classes study the elementary mathematical principles* of aeronautics and navigation.
e. In preparing maps, *students figure scales of miles.*
f. *Advanced mathematical experience* is provided to pupils by means of class work or club work *in which the methods of original mathematical investigation* are discussed and used.

3. *English Composition*

Pupils have experience in different types of writing such as newspaper items, fiction, poetry, letters, history, scientific articles and essays.

a. *Students do an extensive amount of* creative writing, such as composition of poems or short stories.
b. As part of the regular work in English or science, *all students write articles setting forth* scientific *information.*
c. *Students are given experience in composing* newspaper headlines or other concise statements for newspapers.

4. *Speech*

Study of speech includes informal discussion, formal debates, dramatics, and speech correction.

a. *A specialist* in *speech correction* is employed by the schools.
b. *Students frequently* go to other classes *to make* announcements relative to school activities.

3. Excerpts from
MORT-PIERCE TIME SCALE

Worksheet for entering information on twenty two adaptations

Practice	Column 1 Is the adaptation present?		Column 2 Year of introduction	Column 3 Point value
	Yes	No		
1. A remedial reading teacher is employed by the school.				
2. Diagnostic tests in arithmetic are frequently used to discover areas in which additional study and practice are needed.				
3. Pupils study their own community through trips to factories, offices, newspapers, banks and farms.				
4. The course of study worked out cooperatively by the teachers, has been printed or mimeographed for local use.				
5. There are school clubs in science, photography, social service or sports.				
6. Library of motion picture films is maintained by the school system, individually or cooperatively with other systems.				

4. Excerpts from

A.P.S.S. TIME SCALE

Practice	1 Pupils affected today*	2 Year of introduction	3 Year Discontinued	4 Point value
1. A remedial reading teacher is employed by the school system.				
6. Calculating machines are available for student use. (A course in business machines limited to commercial students does not count here).				
29. Movable desks or tables and chairs are provided for pupils in a regular classroom.				
30. Student officers budget and spend student funds within the rules and regulations agreed upon in advance by students and faculty.				

* W (Widespread) :
O (Occasionally) :
E (Experimentally) :

5. CARLSON'S TOOL TO MEASURE RATE OF ADOPTION

Innovations	Whether introduced		Year when introduced
	Yes	No	
1. Modern Math			
2. Programmed Instruction			
3. Team Teaching			

6. LARRY'S INSTRUMENT

This instrument had not been available till the day this monograph was being printed.

7. Excerpts from

MARION'S SCALE OF INNOVATIVENESS

I. Departmentalization—meaning that one teacher teaches the same subject to more than one class in grades four, five and six.

1. (a) Did you use this practice in any other school in which you were principal?

Yes ______ No ______ Not applicable ________.

1. (b) If yes, when did you introduce it? 19 ______.

2. Are you at present using departmentalization?

Yes ________ No ________

If yes,

3. in which subjects are you using it? How many teachers are teaching it in more than one class?

__________ __________ __________ __________
__________ __________ __________ __________
__________ __________ __________ __________

4. When did you first use it in this school? 19 ________.

5. Was departmentalization being used when you were appointed in this school?

Yes ________ No ________

6. Where did the suggestion for departmentalization of your school come from?

(a) You ________? If no, where did you first hear of the practice as being applicable to elementary schools?

(b) Staff ________
(c) Central Office ________
(d) Others ________ specify ________

If no,

7. Have you ever used it ?

Yes ______ No ______

If yes,

8. When did you first introduce it ? 19 ______

9. When did you discontinue departmentalization? 19______

10. Please rate the practice of elementary school departmentalization in terms of the following characteristics.

a. *Relative advantage*

The relative advantage of using elementary school departmentalization in achieving the goals of elementary education as compared with the practice it replaced in grade four, five and six.

1 2 3 4 5 6 7 8 9

No advantage 100% advantage

b. *Compatibility*

The degree to which the practice of elementary school departmentalization is compatible (or harmonious) with other aspects of elementary education.

1 2 3 4 5 6 7 8 9

least compatible more compatible

c. *Complexity*

The relative complexity of using elementary school departmentalization as compared with non-departmentalization.

1 2 3 4 5 6 7 8 9

not complex	very complex

d. *Divisibility*

The degree to which departmentalization may be tried on a limited basis.

1 2 3 4 5 6 7 8 9

not divisible	easily divisible

e. *Communicability*

The relative ease of communicating the ideas and/or results of elementary school departmentalization to other principals.

1 2 3 4 5 6 7 8 9

not communicable	easily communicable

Comments

II. Interviews with parents

This practice means the occasional provision of time for parents to meet teachers during normal school hours by dismissing classes earlier than usual.

1. (a) Did you use this practice in any other school in which you were principal ?

Yes ______ No ______ Not applicable ______

1. (b) If yes, when did you introduce it ? 19______.
Are you at present using parent-teacher interviews ?

Yes ______ No ______

If yes,

3. On how many occasions did you use this practice last year ? ________.

4. When did you first use it in this school ? 19______.

5. Was this practice of providing for parent-teacher interviews being used when you were appointed to this school?

Yes ______ No ______

6. Where did the suggestions for this practice come from ?
   (a) You ________ ? If no, when did you first hear of the practice as being applicable to elementary school ? ____________
   (b) Staff __________
   (c) Central Office __________
   (d) Others __________ specify __________

If no,

7. Have you ever regularly provided time for teachers to meet parents during school hours?

Yes ______ No ______

If yes,

8. When did you first introduce it? 19 ______.

9. When did you discontinue this practice? 19 ______.

10. Please rate the practice of scheduling parent-teacher interviews during school hours in terms of the following characteristics.

a. *Relative advantage*

The relative advantage of using scheduled parent-teacher interviews during school hours in achieving the aims of elementary education as compared with holding interviews outside school hours.

1 2 3 4 5 6 7 8 9

no advantage

100% advantage

y. *Compatibility*

The degree to which the practice of holding parent-teacher interviews during school hours is compatible with other aspects of elementary education.

1 2 3 4 5 6 7 8 9

least compatible

most compatible

c. *Complexity*

The relative difficulty of holding parent-teacher interviews during school hours as compared with outside of school hours.

1 2 3 4 5 6 7 8 9

not complex

very complex

d. *Divisibility*

The degree to which such arrangements for parent-teacher interviews may be tried on a limited basis (not involving the whole school).

1 2 3 4 5 6 7 8 9

not divisible

easily divisible

e. *Communicability*

The relative ease of communicating to other principals the ideas and/or results of holding parent-teacher interviews during school hours.

1 2 3 4 5 6 7 8 9

not communicable

easily communicable

Comments

8. NAN — LIN et al. TOOL

14. I first heard about schedule modification in ——— (month)

16. I first use schedule modification (if you have) in ——— (month) ——— (Year)

For the following items, you may circle the number of the ONE (and only one) category which you feel is appropriate.

11. Schedule modification could constitute an improvement in educational practices in *any* school.

    1. agree very much
    2. agree on the whole
    3. agree a little
    4. don't know
    5. disagree a little
    6. disagree on the whole
    7. disagree very much

13. I think schedule modification represents an improvement in educational practices at my school.

    1. agree very much
    2. agree on the whole
    3. agree a little
    4. don't know
    5. disagree a little
    6. disagree on the whole
    7. disagree very much

28. I think schedule modification is unnecessary in our educational system.

    1. agree very much
    2. agree on the whole
    3. agree a little

4. don't know
5. disagree a little
6. disagree on the whole
7. disagree very much

29. To me, schedule modification is one of the worst things to come into our educational system.

1. agree very much
2. agree on the whole
3. agree a little
4. don't know
5. disagree a little
6. disagree on the whole
7. disagree very much

104. Personally, I feel I can adjust to changes easily.

1. agree very much
2. agree on the whole
3. agree a little
4. don't know
5. disagree a little
6. disagree on the whole
7. disagree very much

105. If we want to maintain a healthy and stable educational system we must keep it the way it is and resist the temptations to change.

1. agree very much
2. agree on the whole
3. agree a little
4. don't know
5. disagree a little
6. disagree on the whole
7. disagree very much

106. Most changes introduced in the last ten years have contributed very little in promoting education in our schools.

  1. agree very much
  2. agree on the whole
  3. agree a little
  4. don't know
  5. disagree a little
  6. disagree on the whole
  7. disagree very much

107. I really believe we could have done a much better job or at least done just as well if things had not been changed so much in our schools.

  1. agree very much
  2. agree on the whole
  3. agree a little
  4. don't know
  5. disagree a little
  6. disagree on the whole
  7. disagree very much

9. MILLER'S INVENTORY OF CHANGE-PRONENESS

Each item on the inventory should be judged on a scale of seven rating. The respective ratings follow :

No, Never	No, Almost Never	Usually Not, Infrequently	Sometimes yes and no	Usually yes, frequently	Yes, Almost Always	Yes, Always
:	:	:	:	:	:	:
1	2	3	4	5	6	7

Common Questions for
Teachers — Principals — Superintendents

1. 1 ____ 4 ____ 7 Is your general disposition towards new ideas and programmes one of open-minded optimism ?

2. 1 ____ 4 ____ 7 Are you willing to try something new — something that will require extra initial effort on your part ?

3. 1 ____ 4 ____ 7 Are you willing to try something new even if it may fail ? (Your answer should not apply to fragmented or poorly planned and structured ideas and programmes).

4. 1 ____ 4 ____ 7 Does your selection of innovations reflect careful thought about the overall needs and priorities of your situation ?

5. 1 ____ 4 ____ 7 When an educational innovation is considered, do you develop or help develop a strategy or plan of action for bringing about its successful implementation ?

6. 1 4 7 ________ Do you feel that you have sufficient freedom to initiate new programmes and/or ideas?

7. 1 4 7 ________ Do you exercise persistence and diplomacy in sticking with an innovation you would like to try, believing "powers that be" can be brought around from what may be an initial coolness?

8. 1 4 7 ________ Are you willing to have your innovation brought under careful scrutiny by your collegues and others with inherent possibilities of conflicting points of view-personal as well as professional?

9. 1 4 7 ________ Do you make a special effort to read about innovations and change in your field?

10. 1 4 7 ________ Do you take time to consider and seek to gain greater insight into the processes of educational change?

11. 1 4 7 ________ Do coffee hour or informal conversations include new ideas and developments in curriculum and instruction?

12. 1 4 7 ________ Are you aware (in terms of knowing some details) of the growing importance of research, experimentation and innovation in American education?

Specific Questions for Teachers

1. Do you take the initiative in contacting other schools and/or school systems that are trying an idea or programme that is of interest to you?

2. Do you bring new ideas and developments to the attention of colleagues as well as appropriate administrative personnel?

3. Are you willing to ask yourself "why" about your teaching methods and the materials used ?

4. Do you feel that your principal encourages you to innovate and to try new ideas and programmes ?

5. Do you feel that the superintendent and the central Office encourages you to innovate and to try new ideas and programmes ?

Specific Questions for Principals

1. Do you encourage and/or provide leadership in developing a planned sequence (strategy) for change when your school introduces a new idea or programme ?

2. Do you seek opportunities to provide your staff and your principals with constructive ideas and suggestions relating to curriculum and instruction ?

3. Is your image among teachers that of an instructional leader — one interested in and supportive of new ideas ?

4. Are you willing to "stick your neck out" (assuming the idea has merit) for a teacher who is interested in trying something new ?

5. Are some staff meetings devoted to new developments and programmes in curriculum and instruction ?

6. Do you have a systematic plan for sharing new ideas and programmes with your faculty ?

7. Does the professional library in your school contain literature on the process of change ?

Specific Questions for Superintendents

1. Does your system have a research and development programme (probably more development than basic research) that has sufficient financial support to undertake meaningful projects ?

2. Do you seek opportunities to provide your staff and your principals with constructive ideas and suggestions relating to curriculum and instruction ?

3. Is your image among teachers that of an instructional leader—one interested in and supportive of new ideas ?

4. Are you willing to "stick your neck out" (assuming the idea has merit) for a member of your staff ?

5. Are some staff meetings devoted to new developments and programmes in curriculum and instruction ?

6. Do you have a systematic plan for disseminating new ideas and programmes to administrators and teachers in your system ?

7. Does the central professional library for your system contain literature on the process of change ?

8. Does your school system have an individual who is specialist in innovation and the process of change and who devotes at least a portion of his time to such responsibilities ?

9. Has the board of education had an opportunity to learn about educational change, both in terms of directions as well as processes of change ?

10. RAO'S INSTRUMENT TO MEASURE INNOVATIONS IN SECONDARY SCHOOLS

Purpose and Areas

The present instrument is intended for high schools to find out what innovations the school is actually trying or evolved out of its experience and tradition. What is an innovation in one school may already been an established practice in another. This instrument gives an idea of how far a school has progressed along new paths and how far new trends and practices have entered into the school and classroom. The changes were broadly put in seven areas.

Innovations in (1) syllabus and class instruction, (2) the teaching of skills, (3) enrichment of knowledge, (4) variety of experiences provided to students, (5) student services, (6) examination, evaluation, internal assessment, (7) school adminisrtation and community relations.

Each item in the instrument is a description of a specific practice picked out of a number of practices noted by the researcher. This is not an exhaustive list. So the schools can report any other practice not mentioned here. The practices are to be found mainly in the Higher Forms and while checking the practices this should be kept in mind. Each of the seven areas has got a clear and specific purpose and a philosophy behind. it.

The technique of checking the instrument is finding in a school the presence or absence of each specific practice and placing a check across the number under the given area in the answer sheet. The principal has to check only after reading the description of the practice given in this instrument under the seven areas. He should read, before checking whether a practice is there or not, *the statement of purpose* for which the described practice is intended for. The *italicized portion* in each practice indicating the purpose *should be kept in mind specially in trying to equate the actual practice in the school with the* *practice given in this instrument.* Also *mention the classes for which the practice is actually applicable.* Please *mention the particular year from which the practice is being followed in your school.* Just mention the year of starting for each practice.

Reporting a New Practice.

If you have in your school *a new practice or practices under* any area not listed in this instrument, but achieving the purpose mentioned therein, it should be written in the answer sheet under 'any other' against the number in answer booklet.

If a listed practice is not found completely but only partially or if there is any variation write across the number in answer sheet the partial practice or variation you have got under 'any other details' in the answer sheet.

Precautions

Any innovation or practice which is not being pursued recently by the schools, or which is being carried namesake or half heartedly or which is a showpiece, *should not be checked or reported under the areas.* The practice should be part and parcel of regular school activity. If anything is being experimentally tried in a case it should be checked in answer sheet with E as symbol. The precautions are to be observed, otherwise the reporting becomes unreliable. If a practice is found occasionally, or once in a year etc., you can *qualify your checking with remarks like occasionally* in col. 5 of the answer sheet.

I. *Innovations in Syllabus and Classroom Instruction*

The innovative schools are dissatisfied with the existing curriculum and classroom instruction. The syllabus is being changed, altered, rearranged and deficiencies are being converted according to the needs. Sometimes the syllabus is being enriched by the use of reference material, parallel text books, additional programmes or through projects. Have you moved along this new path ?

Directions : Here under is a list of innovations that are being tried in schools. Make a single check in score sheet attached to this form, if you have got the same practice as mentioned below. Other directions as noted earlier.

1. The *order and arrangement* of structures or the *lessons* given in Language or other text books *was altered suitably* and *new reading material* was provided.

2. An experiment — *project to teach new content* and *developments* is being tried (e.g. Set Theory in Algebra).

3. The *syllabus* in Mathematics, Science or Social Studies was *recasted into suitable lesson units, Major and Minor concepts* and *learning experiences* (mention the subject and class in answer sheet).

4. Mathematics, and General Science or Social Studies is studied by students by *dividing the syllabus* into a number of *suitably devised projects* with the help of resourceful teacher.

5. *Suitable reference material is used by the teacher as an aid to his teaching with less emphasis on text books and verbal talk* by teacher. Evidence - An index of suitable reference material for teaching various units should be available to the teacher.

Please mention any other innovation in answer sheet.

II. *Innovations in the Teaching of Skills*

An innovative school lays much emphasis on the *mastery and use of Basic Skills* like Reading, Writing, Speech, Arithmetic *for broadening into specific study and problem solving abilities.* For achieving the above, a number of new practices are being tried, with the help of suitable reading material, instructional programmes, effective use of library services etc. The aim is to give as many opportunities as possible to pupils for the mastery of skills. Here some practices for developing reading through the effective use of library are mentioned.

Directions : Here under is a list of practices. If you are trying any other practice in your school in developing other skills in a practical way, write against 'any other' in answer sheet.

6. *The class library* consists sets (5 to 10 copies) *of suitable reading material under different* headings.

7. *The class teacher* or any other teacher during his lecture time *guides the pupils how to select and read books* for pleasure.

8. *Pupils* are asked to give *intresting point, anecdots or stories from what they have studied from the books* given by the teacher.

9. The class is divided into two or more groups and the first few minutes are utilized for members of one group to put questions to the other batch and somebody in the other batch answering, this being done in Rotation *to develop the ability of speech*. Any other please mention in answer sheet.

III. *Innovations in the Enrichment of Knowledge*

1. As the bounderies of knowledge are expanding rapidly, the pupils are being helped by the innovative schools to get that knowledge through a large variety of sources like printed material reference books, pamphlets, newspapers, magazines, etc.

2. Personal resources—scientists, doctors, professors, etc.

3. Community resources like municipality, local library, hospital, museum etc., and

4. Audio-visual aids like concrete globes, maps, charts, models, and manipulative sound films, slides, linguaphone, tape-recorders, etc.

Directions as earlier.

10. *Pupils of each class* are provided with sets of 5 to 10 *popular magazines suited to their level for increased breadth of knowledge* in literature, science, social studies, arts, etc.

11. *A collection of pamphlets from different sources is used by pupils related to the study of topic going on in the classroom* (e.g. health and bacteria in science, glimpses of Africa in Geography).

12. Well informed parents and citizens are called upon to make *an unusual contribution of knowledge to school or class* (e.g. A parent who lived in Africa gives a talk or shows slides on the life and customs of the country).

13. Pupils study the *local historical, geographical and civic facts of their community* through a visit to various sources (e.g. visit to Municipality to study civic problems).

14. Pupils are taken by the teacher *to study local* institutions (Hospital, Sanitorium. Water Works, Banks, Laboratorits, Local industries, etc.) and *they interview the concerned authorities and record the facts.*

15. *Films, film strips, slides are used frequently and regularly as an institutional device in the teaching of various topics in the classroom.*

16. *Radio lessons given by All India Radio are intergrated with the teaching of various subjects in class.*

17. *Modern devices* like Linguaphone and tape-recorder are used in the *teaching of English.*

18. *Documentary films, films on modern developments and current events got* from different sources are integrated with the *broadening of knowledge in science and social studies.*

Any other please mention in answer sheet.

IV. *Variety of Experiences*

To make the pupil develop a well integrated personality, to train him to assume the future duties of adulthood and citizenship and to develop his knowledge and skills in various directions, a variety of curricular and cocurricular experiences are provided to the majority of children (at least 60 per cent) through various activities of school. Pupils are also trained in behaviour patterns like character in action, citizenship, national integration, international understanding through purposeful and well planned activities.

Directions as usual. Any thing special in your school, please give details separately.

19. Literary *experiences are provided* to a majority of children *through regular debates, discussions, literary meetings and through literary competitions* as part of regular work.

20. Pupils take part in *well conducted civil activities (e.g. science club) once in a week regularly*. (Mention the clubs in answersheet).

21. Pupils do *community service* like sweeping, laying roads and path ways *in school or outside*, convert a waste area into garden and thus learn dignity of labour.

22. As part of *citizenship training*, pupils take up duties now and then like traffic regulations, first aid, helping fire victims, etc.

23. Pupils *study the dress and food habits* of people in other regions of the country like Andhra, Bengal, Kerala, Orissa by visiting or inviting people *(to develop national understanding and integration in pupils)*.

24. Pupils take up a project *to study United Nations and* its bodies, how they work and how they are promoting international peace, *(to develop International understanding in pupils)*.

Any other please mention in answer sheet.

V. *Student Services*

The innovative schools are using various devices to discover the talents of the students. They also give guidance in choosing their education and career, provide health services, provide milk, uniform, books, scholarships to the needy children, thus looking into the primary and secondary needs of children, specially needy ones.

Directions as usual.

25. The school *administers* Intelligence, Aptitude, Adjustment Tests and the *results are discussed among the staff.*

26. Personality traits like Neatness, Industry, Leadership *are assessed periodically* through *ratings, recorded observations, sociograms, etc.* (Mention the tools you use in answer sheet).

27. *A cumulative record card* is maintained for each pupil with *emphasis on achievement, aptitudes, interests, personality traits and other outstanding accomplishments and deficiencies and these are discussed with parents.*

28. *Special coaching and assignments are* provided for *backward children* in different subjects after first examination.

29. *Students of higher classes* (IX & X) are given *guidance* through films, charts pamphlets and posters and supplied literature *on different courses and careers available to them.*

30. After health check up, *remedial treatment is given for defects and disabilities like* eyesight, hearing, anaemia etc. for a nominal fee *with the help of local doctors and specialists.*

31. *Needy students are provided with uniform,* foot wear, books, and scholarships *through special funds or by voluntary organizations.*

Any other please mention in answer sheet.

VI. *Examination, Evaluation and Internal Assessment*

The innovative schools are currently seized with changes in the examination system. 1. Use of a variety of instruments. 2. Internal assessment to measure the periodic progress. 3. Changes in the setting of question papers to test different types of questions— are some of the Innovations being brought about by some schools to make the instruments more perfect.

If you have anything special, give details separately. Directions as usual.

32. *A blue print of different objectives and units to be* tested *is prepared before setting of question papers in* different subjects.

33. *Objective type of questions, short answer tests are given due weightage* (at least 50 per cent of marks) *in all test* papers during terminal and other examinations.

34. *Oral tests are given to test oral skills* in languages and English.

35. *Practical tests* are given *to test practical skills* in science.

36. *Internal marks are given for assessment* of home work, class work, assignments, work books, practical records, etc.

37. *Choice in question papers* during the terminal and final examination *is reduced to the minimum or completely being eliminated.*

Any other please mention in answer sheet.

VII. *School Administration and Community Relations*

The innovative school looks for better organization and human relations, administration and planning of its services and programmes. The need is felt for constant improvement. The school also looks into the professional needs of its staff to increase their competence.

The school also plays a positive role in regard to the needs of the surrounding community. The programmes of the school are enriched by the interest and services provided by various organizations and groups in the community. It attracts the the attention of the public. The school is also a centre of the community activities. Are you able to bring any innovations ? Please give details.

Directions : same as before.

38. The headmaster holds a weekly or monthly meeting of the staff wherein the programmes of the month, outstanding achievement of pupils, administration of tests, etc. are discussed and planned systematically. (Mention the topics of discussion the periodicity of staff meetings in answer sheet).

39. The headmaster organizes a number of meetings, discussions on modern trends and practices in education for teachers in the locality with the co-operation of other schools, training colleges and experts.

40. The responsibility of the smooth functioning of various programmes is delegated to a number of teachers in association with pupil representatives.

41. Teachers are sent to attend seminars, refresher courses to learn about the new trends and practices in the schools from leaders in the profession.

42. Teachers are encouraged and guided to take up experimental projects or try some new ideas, thus helping the teachers to develop more professional competence.

43. Members of the surrounding community and parents are invited to help to organize and witness dance, drama, music performances, national programmes, etc.

44. School plant, auditorium and other facilities are made available to literary, cultural social and other organizations and groups in the community either freely or on a nominal rent.

45. Associations like Red Cross, Rotary Club, Literary Club and Commercial Organizations and agencies hold sports, literary, music, drama, art competitions for school pupils and other pupils in the area.

Any other please mention in answer sheet.

11. INDICES OF INNOVATIVENESS — SEGER AND HOLDAWAY

Innovations	Whether adopted		Extent of adoption		Year when adopted
	Yes	No	Partly	Fully	
1. Departmentation of staff in grades 4-6.					
2. Regular and systematic use of central office consultants.					
3. Parent-teacher interviews during school hours.					
4. The teaching of French in grades 5 and 6.					
5. Regular use of television as an educational aid.					

12. BHOGLE'S INSTRUMENT TO MEASURE ACCEPTANCE OF INNOVATIONS

Questionnaire for Measuring the Adoption of Innovations by School Headmasters

The Innovation	When did you first hear about it	Did you try to get any information about it with a view to implement in your school		Did you try it out on a sample to know its advantages and disadvantages		What was your reaction to it		Did you implement it in your school		If yes to the previous question, are you still practising it	
		Yes	No	Yes	No	Before trying it out	After trying it out	Yes	No (Why)	Yes	No when did you reject it
Formation of Science Clubs	19	19		19				19			19
Deputation of teachers for refresher course	19	19		19				19			19
Establishment of Vocational and Child Guidance Clinics	19	*19*		*19*				19			19
Improvement of School Libraries under centrally sponsored scheme	19	19		19				19			19
Teaching with audio-visual aids	19	19		19				19			19

QUESTIONNAIRE FOR MEASURING THE ACCEPTANCE OF INNOVATION BY SCHOOL TEACHERS

INSTRUCTIONS

In this type you will find twenty groups of statements. Each group contains three statements. Please read the three statements carefully and decide the statement with which you agree most. Now indicate your decision by making a mark against the letter (A, B, C) of the statements in the answer sheet provided. Please do not omit any item.

Example :

A. Student indiscipline is the most important problem that worries me daily.

B. Student indiscipline is, of course, one of the problems for teachers but I think the students will improve by themselves.

C. I do not think students are so much indisciplined as to require any special attention.

A	B	C
	✓	

Now proceed accordingly :

1. (a) If a teacher knows how to teach and if the text-book is interesting to read there is no need for a science club.

   (b) In teaching science something like a student society or club is needed to discuss about the subject.

   (c) Science clubs are sometimes felt necessary but are not an important requirement of a good school.

2. (a) I know that refresher courses could be very useful for a high school teacher.

   (b) I did not know that schools can send their teachers to attend refresher course to keep up their efficiency.

   (c) I have heard about refreshsher courses but I do not know much about the actual programme.

3. (a) Frankly speaking sometimes I am quite enthusiastic about vocational guidance clinics but sometimes not.

   (b) I have always been interested in having a vocational guidance clinic for my school. It helps a teacher to consult with counsellors in these clinics and give proper guidance to his students.

   (c) Many schools have a vocational guidance clinic that does not serve any useful function.

4. (a) A centrally sponsored scheme on library improvement is an excellent idea; the schools do not lose anything by it but gain much.

   (b) The existing library facilities are generally adequate for a school. The scheme of improving school libraries will be beneficial where the library facilities are deficient.

   (c) Just more addition of books to the libraries may not make the students any better.

5. (a) I do not like the idea of science clubs. Organizing science clubs involves labour and trouble disproportionate to the possible gain.

   (b) I cannot say whether, I like or dislike the idea of running a science club.

(c) The idea of running a science club is quite interesting and I feel it can be more useful sometimes than regular teaching.

6. (a) Many students could be properly guided if there are vocational guidance clinics attached to a school.

(b) Under the present day developments nobody can be sure whether vocational guidance clinics are wanted or unwanted.

(c) I do not think there is any need for vocational guidance clinics in schools.

7. (a) Deputing teachers for refresher course is a definite improvement in our educational system.

(b) Refresher courses are in many instances a waste of time and money.

(c) Benefit that an individual can derive from a refresher course depends on his own efforts.

8. (a) Children can understand the subject better when they are taught with the help of films and charts.

(b) I cannot understand how movies can be more effective than oral expression.

(c) I often hear that audio-visual aids are more useful in teaching but I do not know how useful they are.

9. (a) Vocational guidance clinics is yet another experiment introduced in the schools and we have to wait and see how useful it turns out to be.

(b) Now with the vocational guidance clinics a father can consult a trained person interested in his son. It would definitely help him to advise his son in his plans for his future.

(c) Parents are the real guides to the children and it is their duty to decide their children's future and not any duty of the teachers. Vocational guidance clinics are just another modern fad.

10. (a) It is not necessary to have elaborate library facilities for high schools.

(b) My school library is adequate for the needs of the students and the teachers.

(c) There is a dire need for improved library facilities in my school.

11. (a) Frankly speaking, I did not know about science club activities till today.

(b) I have heard about science clubs. I think they are for science teachers to be bothered by.

(c) I know about science club activities in schools and I am sure they are very useful to students.

12. (a) In my classes, I occasionally make use of audio-visual aids as this is recommended in modern techniques of teaching.

(b) I resort to use of audio-visual aids only because the school authorities insist on it.

(c) I often keep thinking how maximum use could be made of audio-visual aids.

13. (a) I do not know whether there really exists any centrally sponsored scheme for improving school libraries.

(b) I have vaguely heard about a centrally sponsored scheme of library improvement but do not know much about it.

(c) I know of different schemes which have been employed to improve the school libraries.

14. (a) I would feel very interested in attending a fresher course.

(b) If I am to attend a refresher course I do not know whether I will like it or not.

(c) The only attraction I have for a refresher course is that I get a paid holiday.

15. (a) I do not have any definite opinion about the audio-visual aids.

(b) The very fact that most teachers do not use audio-visual aids shows that they are not of much use.

(c) Use of audio-visual aids should not only be encouraged but sometimes even insisted upon.

16. (a) I cannot say whether refresher courses for teachers are really necessary.

(b) A good teacher can be effective even without attending refresher courses.

(c) Periodic refresher courses are absolutely necessary for teachers to keep up their efficiency.

17. (a) Science club does not serve any important function. It is just a fancy idea in the so-called progressive schools.

(b) Students definitely become more mature in science subjects at a much younger age if they are continually associated with a science club.

(c) In a few instances it is possible that science clubs help in developing a scientific attitude in pupils.

18. (a) Many of us hear about the most useful role played by vocational guidance clinics but I have yet to see one in practice.

(b) I have heard about vocational guidance clinics organized in schools and I know how they operate.

(c) I have not heard much about vocational guidance clinics in schools.

19. (a) Audio-visual aids are invaluable for a teacher in teaching effectively.

(b) Teachers can teach excellently with simple methods even without any audio-visual aids.

(c) Projectors and films are occasionally helpful and useful in teaching, but it is not absolutely necessary for a school to possess them.

20. (a) The different schemes for improving school libraries do not attract me much.

(b) I am very much interested in learning about the centrally sponsored scheme for improving school library because that will help me develop my school library.

(c) My interest in the scheme of improving school libraries goes to the extent of thinking that instead of blindly expanding the libraries one should strengthen the existing ones.

13. ROOSA'S SCALE OF RATE OF ADOPTION

Innovations	Date of adoption	Usage at adoption	Date & amount of changes in usage
1. Ungraded classrooms.			
2. Pre-Kindergarten Programmes.			
3. Humanities course is taught.			
4. Programme to increase awareness of and sensitivity to racial integration.			
5. Head start programme.			
6. Data processing as the part of the instructional programme.			
7. Flexible scheduling.			
8. Instructional Materials centre.			
9. School involvement with nearby university personnel for research and development activities.			
10. Middle school plan of organization.			
11. Non-western studies as part of social studies programme.			
12. Programme to develop international understanding.			
13. Some form of extended year.			
14. I.T.A. as beginning Reading Method.			
15. T.V. tape programme.			
16. Lincoln centre educational programme.			
17. Participation in shared services with nearby schools.			
18. Reporting practices involving much parent participation.			
19. Departmentalized programme for intermediate grades.			
20. Programmes for talented and exceptional students.			

14. BUCH'S ADAPTABILITY SCALE

Please give information about those innovations which you have introduced in THIS school.

Innovations	Whether introduced	Partially or fully	Year of introduction	Continuous or/not
1. Objective centered evaluation of pupils' achievement.				
2. Internal assessment (other than 20 per cent marks prescribed by the department).				
3. Maintaining a cumulative record card (only if the C.R.C. is maintained systematically and scientifically).				
4. Objective type test.				
5. Unit tests.				
6. Weightage to different examinations held in the course of an year to decide promotions.				
7. Annual seminar of teachers.				
8. Library centred teaching.				
9. Open shelf library.				
10. Experimental and developmental projects.				

	Whether introduced	Partially or fully	Year of introduction	Continuous or/not
11. Cooperative projects by teachers of the same school or of different schools.				
12. Stimulating creativity amongst pupils.				
13. Remedial programme for the backward children.				
14. Programmes for the gifted children.				
15. Developing reading habits among pupils.				
16. Parent-Teachers Association (if it is functioning systematically).				
17. Subject departments of teachers				
18. Educational and vocational guidance.				
19. Student's work-book.				

15. RAI'S INSTRUMENT TO MEASURE DIFFUSION OF INNOVATION

(The innovation is "Setting better question papers").

10. I came to know about the technique of 'Setting better question papers' in ———— (month) ———— (year) for the first time.

11. I first used the improved pattern of question papers (if you have) in ———— (month) ———— (year).

12. The 'programme of improving papers' could constitute an improvement in educational practices in any school.

    1. agree very much .... 1 ....
    2. agree a little .... 2 ....
    3. don't know .... 3 ....
    4. disagree a little .... 4 ....
    5. disagree very much .... 5 ....

13. I think 'setting better question papers' represents an improvement in educational practices at my school.

    1. agree very much .... 1 ....
    2. agree a little .... 2 ....
    3. don't know .... 3 ....
    4. disagree a little .... 4 ....
    5. disagree very much .... 5 ....

14. I think the 'programme of improving question papers' is unnecessary in our educational system.

    1. agree very much .... 1 ....

2. agree a little ....2..............
3. don't know ....3..............
4. disagree a little ....4..............
5. disagree very much ....5..............

15. The 'programme of improving question papers' is one of the worst things to come into our educational system.

1. agree very much ....1..............
2. agree a little ....2..............
3. don't know ....3..............
4. disagree a little ....4..............
5. disagree very much ....5..............

16. Personally, I feel I can adjust to changes in educational practices easily.

1. agree very much ....1..............
2. agree a little ....2..............
3. don't know ....3..............
4. disagree a little ....4..............
5. disagree very much ....5..............

17. If we want to maintain a healthy and stable educational system, we must keep it the way it is and resist the temptation to change.

1. agree very much ....1..............
2. agree a little ....2..............
3. don't know ....3..............
4. disagree a little ....4..............
5. disagree very much ....5..............

18. Most changes introduced in the last ten years have contributed very little in improving education in our school.

    1. agree very much .... 1 ....
    2. agree a little .... 2 ....
    3. don't know .... 3 ....
    4. disagree a little .... 4 ....
    5. disagree very much .... 5 ....

19. I really believe we could have done much better job or at least done just as well if things hadn't been changed so much in our school.

    1. agree very much .... 1 ....
    2. agree a little .... 2 ....
    3. don't know .... 3 ....
    4. disagree a little .... 4 ....
    5. disagree very much .... 5 ....

16. BHAGIA'S TOOL TO MEASURE ADOPTION AND DIFFUSION OF INNOVATIONS

INTRODUCTION OF INNOVATIONS

Please furnish the information asked about the introudction of innovations listed below. Tickmark below 'yes' if the innovation is introduced and mention the year in which it was first introduced. Otherwise tickmark below 'no'. Respond similarly for continuation of each of the innovations.

Innovations	Introduction			Continuation		
	Yes	Year	No	Yes	No	Year when discontinued
1. Institutional planning.						
2. Unit planning.						
3. Objective type tests.						
4. Educational and vocational guidance.						
5. Cumulative Record Card.						
6. Science Club.						
7. Work experience.						
8. Cooperative Store.						
9. Programme for the gifted children.						
10. Special arrangement for the backward children.						
11. Weightage to periodical tests in annual promotions.						
12. Hobby Centre.						
13. P.T.A. (Functioning).						
14. Staff Seminar (Regular) to discuss academic problems.						

17. DOCTOR'S SCALE OF INNOVATIVENESS

Scale Points	
10	Highly innovative and as a model for the schools of Gujarat.
9	Highly innovative with diffusion in and leadership in nearby schools (acting as change agent)
8	A school with instructional practice with diffusion within the institution and having congenial climate.
7	A school with two or more institutionalized practices.
6	A school with more than one innovative practice and more absorbed in the processes of various innovations.
5	Reaching the adoption stage for one innovative practice (good potentiality for innovativeness).
4	Trying to reach the experimental stage.
3	Trying to reach the interest stage.
2	Slightly trying to reach the awareness stage.
1	A non-innovative traditional school.

18. MUKHOPADHYAY'S CHANGE PRONENESS INVENTORY (CPI)

This is a test of Change Proneness. It comprises a few questions which can be answered in five ways —

1. Never, 2, Seldom. 3, Occasionally, 4, Often and 5, Always.

I would request you to answer the questions by putting a tick mark (√) in appropriate number which best represents your position.

Please answer all the Questions. Do not leave a single item.

Please fill up the following blanks :

Name of the School ______________

Age ________ Sex ________ Qualifications ________

Teaching subjects ______________

Date __________

	Never	Seldom	Occasionally	Often	Always
	1	2	3	4	5
1. Do you try with different methods of teaching for a particular subject?	1	2	3	4	5
2. Do you refer textbooks other than prescribed in your school in your subject?	1	2	3	4	5
3. Are you willing to try something new which may increase your work-load?	1	2	3	4	5

	Never	Seldom	Occasionally	Often	Always
	1	2	3	4	5
4. Do you mind trying something new which may fail ?	1	2	3	4	5
5. Do you think critically before trying or accepting a new practice?	1	2	3	4	5
6. Do you prepare a plan for bringing about a successful implementation?	1	2	3	4	5
7. Do you think that you will try with a new practice even if the principal is not willing?	1	2	3	4	5
8. Will you try to implement an innovation when other colleagues are cold or critical about you?	1	2	3	4	5
9. Do you exercise persistence and diplomacy in sticking with a new practice?	1	2	3	4	5
10. Do you like your innovation to be carefully scrutinised by your colleagues when there are chances of conflicting points of view?	1	2	3	4	5
11. Do you make any effort to know about the process of educational change?	1	2	3	4	5

	Never	Seldom	Occasionally	Often	Always
	1	2	3	4	5
12. Do you try to know about the process of educational change?	1	2	3	4	5
13. Do you talk about new ideas or practices in leisure hours?	1	2	3	4	5
14. Does your gossip or chit-chats with friends accomodate discussion about the new practices?	1	2	3	4	5
15. Do you think that educational research has got any relevance to your work?	1	2	3	4	5
16. Do you think that the innovations suggested by the training colleges are practicable?	1	2	3	4	5
17. Do you take initiative in contacting other schools that are trying new ideas?	1	2	3	4	5
18. Do you bring new ideas and developments to the attention of other teachers as well as principal?	1	2	3	4	5
19. Do you question yourself about teaching methods?	1	2	3	4	5
20. Do you see educational journals?	1	2	3	4	5

	Never	Seldom	Occasionally	Often	Always
	1	2	3	4	5
21. Will you try something which is suggested by the students?	1	2	3	4	5
22. When you are a teacher of a higher class do you mind being given classes in the lower class?	1	2	3	4	5
23. Do you think that any innovation can be tried out?					
24. Do you think that you are always open minded to new ideas?	1	2	3	4	5
25. Are you optimistic about the innovation's capacity to change?	1	2	3	4	5
26. Would you like to change this school after a few years merely to new experiences, when all other things remain unchanged?	1	2	3	4	5
27. Do you think you get adequate freedom to try out new ideas?	1	2	3	4	5
28. Does your colleagues tease you for trying out an innovation?	1	2	3	4	5
29. Do you stop trying out an innovation in order to maintain the relationship with other teachers?	1	2	3	4	5

	Never	Seldom	Occasionally	Often	Always
	1	2	3	4	5
30. Does your headmaster allow you to conduct any experiment of your own may be even with other teachers?	1	2	3	4	5
31. Does your headmaster allow you to conduct any experiment of your own may be even without his permission?	1	2	3	4	5
32. Do you discuss about an innovation with your colleagues?	1	2	3	4	5
33. Do you try something new suggested in a journal?	1	2	3	4	5
34. Do you encourage other teachers to take up new experiments?	1	2	3	4	5
35. Do you continuously try to provide your staff members with new ideas and practice in education?	1	2	3	4	5
36. Do you encourage other staff to have a planned sequence of change?	1	2	3	4	5
37. Do you give any facility to a teacher who is trying something new?	1	2	3	4	5

	Never	Seldom	Occasionally	Often	Always
	1	2	3	4	5
38. Are some staff meetings devoted to the discussion of new developments and program in curriculum teaching methods, examination etc. ?	1	2	3	4	5
39. Do you have a systematic plan for sharing new ideas and programmes with your staff members?	1	2	3	4	5
40. Do you read books on process of educational change?	1	2	3	4	5
41. Does your library have books on educational change process?	1	2	3	4	5
42. Do you give any feedback or make any favour to a teacher who tries with new ideas and experiments?	1	2	3	4	5
43. Do you think that your role that you play is supportive to new ideas?	1	2	3	4	5
43. Do you seek opinion from your teachers in case of any administrative change?	1	2	3	4	5
45. Do you make any effort to try an innovation in school administration?	1	2	3	4	5

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